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TUBE BEND

[0001] The present invention relates to a tube piece designed as a tube bend, with at least one bend zone and two outlet zones adjoining the latter on both sides with in each case an end side for the application of pushing rams of an internal high-pressure tool which comprises a die with a recess forming the production cross section.

[0002] A method for manufacturing a tube bend is already known from German document DE 43 22 711 C2. There, the tube section is bent before internal high-pressure forming and upset axially during the internal high-pressure forming. In the process, the tube section undergoes enlargement of the average diameter, this expansion taking place over the entire periphery relative to the central axis. Starting from a round tube cross section and taking the ovality of the cross section in the region of the tube bend brought about during bending into account, the requisite degree of expansion is greater in this region of the tube section in relation to the average degree of expansion.

[0003] The invention has as an object the object of designing and arranging a tube bend in such a way that stable cross-sectional enlargement is guaranteed during internal high-pressure forming.

[0004] According to this invention, the object is achieved by virtue of the fact that the bend zone has a different cross-sectional shape from the outlet zones with an approximately identical flow cross section. The result of this is that the different cross-sectional shape guarantees loading of the tube bend and at the same time a throttling effect of the bend zone is prevented owing to the constant flow cross section.